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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,960	06/14/2001	Peter Hagerlid	A33846-PCT-	5244

7590

07/24/2002

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EXAMINER
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SISSON, BRADLEY L

ART UNIT	PAPER NUMBER
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1634

DATE MAILED: 07/24/2002

16

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/719,960

Applicant(s)

HAGERLID ET AL.

Examiner

Bradley L. Sisson

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 23,24 and 26-46 is/are pending in the application.
- 4a) Of the above claim(s) 40-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23,24,26-39 and 46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Location of Application***

1. The location of the subject application has changed. The subject application is now located in Group 1630, Art Unit 1634.

### ***Specification***

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 23, 24, 26-39 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfoest et al. (US Patent 5,104,621), in view of Rushbrooke et al., and Craighead (US Patent 6,214,246 B1).

7. Pfoest et al., disclose at length an apparatus that can be used in combination with any of a variety of sample receptacles, *inter alia* 96-well or microtitre plates. The device comprises a plate for receiving the sample receptacles, dispensing means to delivering the sample and/or reagents to the various wells. Illumination means, optical detection means and data storage and analysis means. The optical sensing means can be used to measure liquid level, optical density, but also signals generated from a reaction that has taken place in one or more sample receptacles. Fiber optics may be used to deliver one or a plurality of light beams to the various wells.

8. While Pfoest et al., does disclose connecting the light sensing means to a computerized receiver and processing means, which in turns speaks to rendering the light signal to a digital form, Pfoest et al., does not teach explicitly of using a charged coupled device, nor do they teach explicitly of use of the device in a DNA or nucleic acid assay, nor do they disclose

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“simultaneously determining the level of light impinging upon each of said predetermined regions.”

9. Rushbrooke et al., teach at length of using a charged couple device (CCD) so to detect, measure, and evaluate light signals resulting for various chemical/biological assays. The aspect of using such technology in combination with sample receptacles such as a 96-well plate is disclosed in column 11. The application of such technology to DNA assays is found in column 12.

10. Rushbrooke et al., column 2, disclose that the system is arranged such that each sample area is interrogated a plurality of times and that the data is stored and later processed. Such a disclosure is considered to meet, if not anticipate, the limitation of applicant’s “recorder in connection with said light level determination device.”

11. Rushbrooke et al., do not teach “simultaneously determining the level of light impinging upon each of said predetermined regions.”

12. Craighead disclose a device comprising an array of reaction sites where simultaneous readouts are obtained for a plurality of said reaction sites.

13. In view of the teachings of the prior art of record, it would have been obvious to one of ordinary skill in the art at the time that the claimed invention was made to have modified the device of Pfoest et al., so that one would be able so to detect, measure, and evaluate light signals resulting for various chemical/biological assays a plurality of times and to have done so in a simultaneous manner (Rushbrooke et al.) so as to reduce any variability in the assay data collection. In view of the well-developed state of the art and the explicit guidance provided, the

ordinary artisan would have been not only highly motivated but would have also had a most reason.

14. For the above reasons, and in the absence of convincing evidence to the contrary, claims 23, 24, 26-39 and 46 are rejected under 35 USC 103(a).

Response to argument

15. At page 4 of the response received 09 May 2002, hereinafter the response, argument is advanced that the claimed invention has not been rendered obvious by the prior art for *inter alia*, the claimed invention does not require the presence of a light source. This argument has been fully considered and has not been found persuasive towards the withdrawal of the rejection as the claimed invention is considered to encompass such an embodiment. Should applicant wish to eliminate such an embodiment for the claimed invention, applicant is urged to amend the claims such that it is excluded and to indicate where support for its non-inclusion is located in the originally filed disclosure.

16. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that light is generated from an array of reaction sites) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Attention is directed to claim 23, line 7, which reads:

... an optically sensitive device arranged so that in use the light emitted from a particular plurality of samples at said array of reaction sites will impinge upon corresponding predetermined regions of said optically sensitive device”.

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It is noted with particularity that the light is to be “emitted” from the reaction sites, not that it is necessarily generated there. In comparison, the prior art devices also measure light that is emitted at these same regions, yet it is not necessarily generated there. That having been said, it is also noted that the patent of Craighead, column 8, last paragraph, also teaches of the use of an illuminating beam that causes a dye to fluoresce, thereby generating light at the reaction site. Accordingly, the prior art of record is considered to render obvious the measurement of light at a reaction site, be it generated at the site or passing through the reaction site such that it is seen to emit from said reaction site.

17. For the above reasons, and in the absence of convincing evidence to the contrary, the rejection of claims 23, 24, 25-39 and 46 under 35 USC 103(a) is maintained.

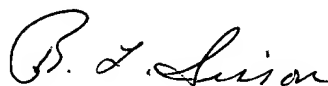
### ***Conclusion***

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley L. Sisson whose telephone number is (703) 308-3978. The examiner can normally be reached on 6:30 a.m. to 5 p.m., Monday through Thursday.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, W. Gary Jones can be reached on (703) 308-1152. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9307 for After Final communications.

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20. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.



Bradley L. Sisson  
Primary Examiner  
Art Unit 1634

BLS  
July 20, 2002